ROY F. WESTON, INC.
1-91 TECH CENTER - BLDG 2
845 BROOK STREET
ROCKY HILL, CT 06067
203-257-3320 • FAX 203-257-3689

NAME: ATLANTIC WIRE
I.D. NO: CTD001161181
FILE LOC: R-5
OTHER:

June 22, 1992
Work Order No. 4100-11-20-0007

RDMS DocID 110195

Ms. Sharon Hayes
Work Assignment Manager
U.S. EPA, Region I
Superfund Support Section (HSS-CAN-7)
John F. Kennedy Federal Building
Boston, MA 02203-2211

Subject: Final Preliminary Assessment Plus Report
Atlantic Wire Company
Branford, Connecticut
CERCLIS No. CTD001161181
TDD No. 9108-38-AWE
Work Assignment No. 11-1JZZ

Dear Ms. Hayes:

Enclosed are three copies of the Final Preliminary Assessment Plus Report for Atlantic Wire Company, One Church Street, Branford, Connecticut. Two copies of the final report has been sent to Doug Zimmerman, CT DEP Superfund contact, in Hartford. The EPA Draft PA report and package comments were received on May 28, 1992. Comments were not received from the CT DEP.

- Jane Anderson (EPA)
- Juan Perez (EPA)

The Final Preliminary Assessment Plus Report was prepared under Work Assignment No. 11-1JZZ.

Please call me or George Gurney at (203) 257-3320, if you have any questions regarding this report.

Very truly yours,

ROY F. WESTON, INC.

Joseph D. Mastone
WESTON Region I ARCS
Site Manager

JDM/arc
Enclosures

cc: J. Anderson (Site Assessment Manager)
D. Cook (Task Manager)
R. Kraybill (WESTON Deputy Program Manager)
E. Waterman (EPA/RCRA)

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June 22, 1992
Work Order No. 4100-11-20-0007

Mr. Doug Zimmerman
Superfund Site Assessment Contact
State of Connecticut
Department of Environmental Protection
165 Capitol Avenue
Hartford, CT 06106

Subject: Final Preliminary Assessment Plus Report
Atlantic Wire Company
Branford, Connecticut
CERCLIS No. CTD001161181
TDD No. 9108-38-AWE
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Enclosures
cc: J. Anderson (Site Assessment Manager)
S. Hayes (EPA Work Assignment Manager)
D. Cook (Task Manager)
R. Kraybill (WESTON/Deputy Program Manager)

June 22, 1992

Final Preliminary Assessment Plus Report
Atlantic Wire Company
Branford, Connecticut

Work Order No. 4100-11-20-0007
Work Assignment No. 11-1JZZ
TDD No. 9108-38-AWE
CERCLIS No. CTD001161181

INTRODUCTION

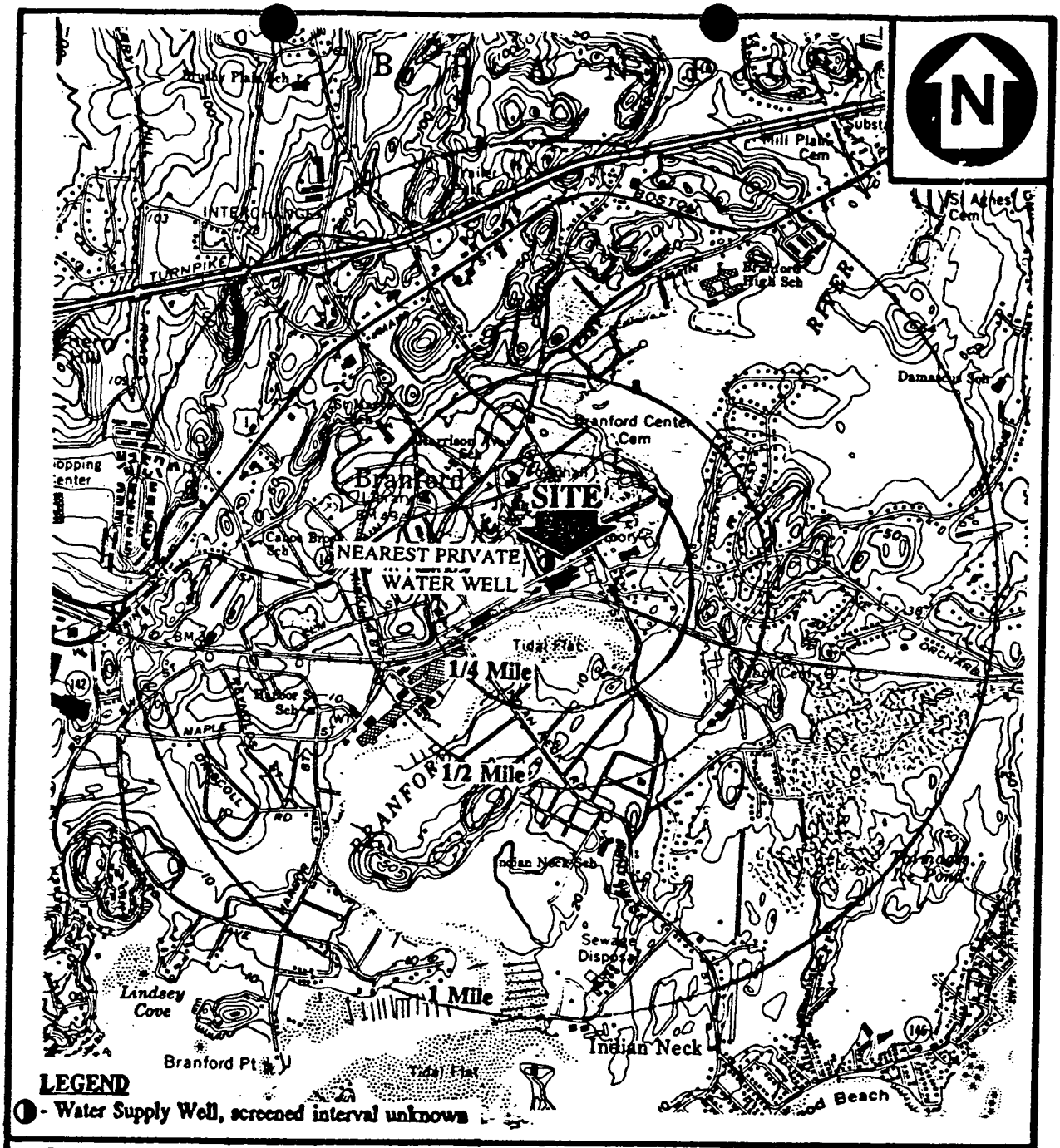
The Roy F. Weston Inc., Alternative Remedial Contracts Strategy (ARCS/Region I) team was requested by the Region I U.S. Environmental Protection Agency (EPA), Waste Management Division, to perform a Preliminary Assessment Plus (PA-PLUS) of the Atlantic Wire Company (Atlantic) property in Branford, Connecticut. Tasks were conducted in accordance with the ARCS contract, the PA-PLUS Scope of Work and Technical Specifications provided by the EPA under Work Assignment No. 11-1JZZ, which was issued to ARCS/Region I on August 27, 1991. This PA-PLUS report was completed as part of EPA's Environmental Priorities Initiative (EPI), a joint project overseen by the Resource Conservation and Recovery Act (RCRA) program and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) program, more commonly known as Superfund.

Background information used in the generation of this report was obtained through file searches conducted at the Connecticut Department of Environmental Protection (CT DEP) and EPA, telephone interviews with town officials, and individuals knowledgeable of the property history and characteristics, and conversations with Federal, State, and local agencies. Information was also collected during the ARCS/Region I on-site reconnaissance (OSR) which was conducted on March 10, 1992.

This package follows the guidelines developed under Superfund. However, these documents do not necessarily fulfill the requirements of other EPA regulations such as those under the Resource Conservation and Recovery Act (RCRA) or other Federal, State or local regulations. The PA-PLUS provides a preliminary screening of facility operations. The Environmental Priorities Initiative (EPI) presents an integrated RCRA/CERCLA approach to assessing RCRA facilities, utilizing procedures that combine elements of the Superfund Preliminary Assessment (PA) and the RCRA Facility Assessment (RFA). Under the EPI, current and former hazardous waste treatment, storage and disposal facilities regulated by the RCRA program are being evaluated to determine whether corrective action may be warranted. The PA-PLUS is a limited effort and is not intended to supersede more detailed investigations.

SITE DESCRIPTION

Atlantic is located at One Church Street in Branford, New Haven County, Connecticut. The property is located at latitude 41°16'37" and longitude 72°48'29" (Figure 1). Atlantic produces steel wire for use by various industrial manufacturers. The property is bordered by Meadow



BASE MAP IS A PORTION OF THE FOLLOWING U.S.G.S. QUADRANGLE(S):
BRANFORD, CONNECTICUT 1984 1:24,000

1 MILE 0.5 0 1

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

LOCATION MAP
ATLANTIC WIRE CO.
BRANFORD, CONNECTICUT

ARCS REGION I
CONTRACT NO. 68-W9-0018

FIGURE 1

Street to the north and an Amtrack right-of-way to the south. The Branford River is located south of the right-of-way. Montowese Street is located to the east; Church Street and a residential area are located to the west of the property (Cook 1992a). The approximate distance of the nearest residence to the property is 500 feet. Atlantic is located in a section of Branford zoned for industrial use and has operated on the property from 1906 to the present (Cook 1992b).

Topographically the property lies in a coastal area with on-site elevations approximately 10 feet above sea level. The property slopes gently southward toward the Branford River (Cook 1992a). South of the property, topography slopes gently southeast into the Branford tidal flat area (USGS 1984).

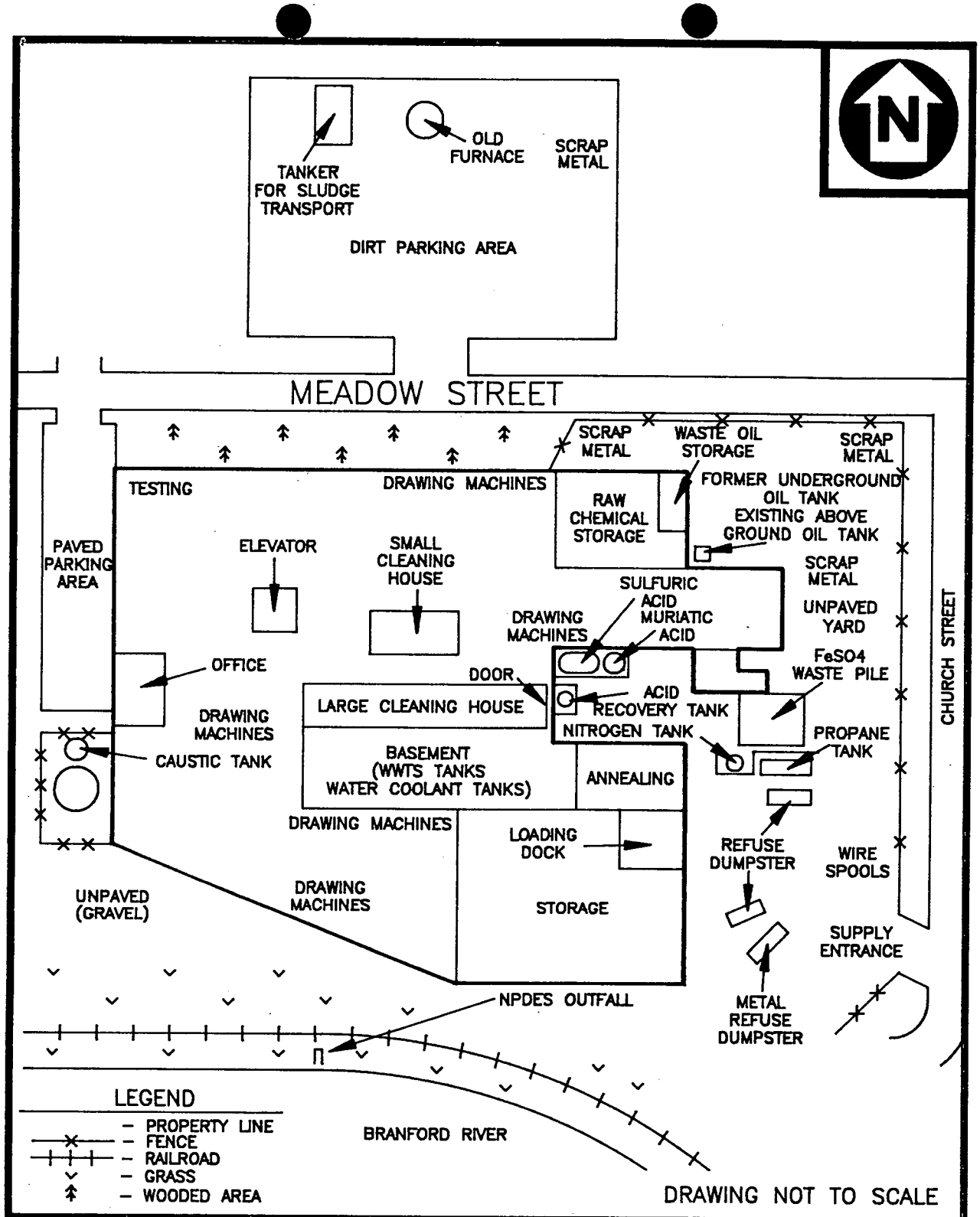
The property is approximately five acres in size and includes one three story slab-on-grade structure built in the early 1900's. Additions have been made to the original structure through the 1970's (Cook 1992a). The property is served by municipal water and sewer systems (Cook 1992a).

Figure 2 shows property features observed during the OSR. The delivery yard area, surrounding the building to the north and the east, is a dirt covered lot. Used wire coils, miscellaneous metal scrap and former production line tanks are located in the delivery yard (Cook 1992a). A small paved parking lot is located on the northwest side of the building, as shown on Figure 2. Dirt covered parking areas and driveways surround the building to the north, east, and south.

One steel 100,000 gallon wastewater treatment system tank, and one steel 3,000 gallon caustic storage tank are located south of the paved parking lot. These tanks are located on a unbermed gravel area and are enclosed by a locked chain link fence with a locking gate (Cook 1992a). Atlantic discharges 317,000 gallons per day (gpd) of treated wastewater into the Branford River under NPDES permit No. CT0000159.

In addition, Atlantic owns a dirt parking lot located north of Meadow Street. A 4,000 gallon tanker truck used to haul wastewater treatment sludge to the Branford landfill was noted on the north side of this lot during the OSR (Cook 1992a). No visual staining was observed in this area. At the time of the OSR, the lot was also used for employee parking (Cook 1992a). A miscellaneous scrap metal pile and annealing furnace previously used as part of Atlantic's production activities were also observed on the east side of the parking lot (Cook 1992a).

One 10,000 gallon aboveground, bermed, steel tank used for No. 6 oil storage, is located outside the chemical storage area (Figure 2). This tank was not included as an AOC because the tank contains petroleum products and are exempt from CERCLA, under the CERCLA Petroleum Exclusion Sections 101 (14) and 104 (a) (2). Three underground No. 2 oil tanks , two of which were 10,000 gallon capacities and one of which was 4,000 gallons, were also located in this area until their removal in May 1989. Two releases of No. 2 oil occurred from one or more of these



SITE SKETCH
ATLANTIC WIRE CO.
BRANFORD, CONNECTICUT

ARCS REGION I
CONTRACT NO. 68-W9-0018

FIGURE 2

tanks in 1978 and 1983 (CT DEP 1978; CT DEP 1983d). No staining was observed in this area at the time of the OSR (Cook 1992a).

Two partially bermed, steel, aboveground tanks are located to the east of the property. These tanks include one 1,200 gallon propane tank and one 9,000 gallon nitrogen tank. Both tanks are located directly on the ground surface. Sulfuric acid and muriatic acid are stored in steel tanks on a bermed concrete pad, located immediately east of the large cleaning house (Figure 2).

A ferrous sulfate crystal waste pile is located on the east side of the property. It is contained in a roofed, open sided building situated on a concrete pad. During the OSR, some of the stored material was observed outside the concrete pad on the ground surface (Cook 1992a).

The property's access is limited by a wooden fence and brick wall surrounding the delivery yard on the north and east sides of the property. No security system or barrier is present on the south and west borders of the property, therefore, access in these areas is not limited.

Twelve Areas of Concern (AOCs) were identified during the OSR. Table 1 summarizes the AOCs at the plant. AOCs are fully described in Appendix A.

Table I

Areas Of Concern Summary

Area of Concern (AOC)	AOC Description	Start-up Date/Closure Date	Release Status	References
#1 - Chemical/Waste Oil Storage	A 30 by 75 foot area of the building located on second floor. Used to store raw chemicals and waste oil.	1970's - Active	Low Potential for Release	Cook 1992a
#2 - Small Cleaning House	First floor of building used for open vats of muriatic acid, potassium permanganate, copper flash liquor and lime used for cleaning and coating of wire.	1906 - Active	High Potential for Release	Cook 1992a; CT DEP 1990
#3 - Large Cleaning House	Area includes open vats of sulfuric acid, lime, phosphate and potassium permanganate used with direct access to outside.	1906 - Active	High Potential for Release	Cook 1992a; CT DEP 1990
#4 - Basement Tank	Two 5,000 gallon water coolant tanks for drawing machines and two 500 gallon storage tanks for rinsewater and floor drag out. The tanks are situated on a concrete floor with no secondary containment. The floor was observed to be stained and in poor condition.	1966 - Active	High Potential for Release	Cook 1992a
#5 - Nitrogen and Propane Tanks	One steel aboveground 9,000 gallon nitrogen storage tank and one steel aboveground 1,200 gallon propane storage tank. Both tanks are partially bermed and are situated directly on the ground surface. No staining was observed around the tanks.	1970's - Active	Low Potential for Release	Cook 1992a

Table 1

Areas of Concern Summary (continued)

Area of Concern (AOC)	AOC Description	Start-up Date/Closure Date	Release Status	References
#6 - Ferrous Sulfate Crystals Waste Pile	A roofed, open sided wooden building containing a ferrous sulfate crystal pile located on a concrete pad.	1970's - Active	High Potential for Release	Cook 1992a, CT DEP 1990
#7 - Delivery Yard Area	The AOC consisted of a dirt yard surrounding the building to the north, east and west. Stained soil was observed during the OSR.	1906 - Active	High Potential for Release	Cook 1992a
#8 - Waste Water Treatment System	Three storage tanks located on the west side of the building: a Lamella clarifier tank, a sludge holding tank, and a caustic storage tank.	1966 - Active	High Potential for Release	Cook 1992a
#9 - NPDES Outfall	The treated wastewater outfalls to the Branford River, located south of the facility. Atlantic has violated its NPDES permit several times from improper polymer adjustment.	1966 - Active	Evidence of a Release to Surface Water	Cook 1992a, CT DEP 1989a, 1989b, ESHD 1988
#10 - Meadow Street Parking Lot	An unpaved parking lot located on the south side of the property across Meadow Street. A tanker truck used to transport wastewater treatment sludge, miscellaneous scrap metal, and a used annealing furnace were observed during OSR. No staining was observed during the OSR.	1906 - Active	High Potential for Release	Cook 1992a

Table 1

Areas of Concern Summary (concluded)

Area of Concern (AOC)	AOC Description	Start-up Date/Closure Date	Release Status	References
#11 - Water Soluble Machine Coolant Tank	A 1,000 gallon steel inground water-soluble coolant tank formerly located along Meadow Street. This tank overflowed on several occasions before being removed in 1984-1985.	1960's - Removed 1984, 1985	Release to Soil	CT DEP 1983a, 1983b
#12 - No. 2 Fuel Oil Tank	Three inground No. 2 oil tanks were located at the northeast corner of the property. Two of these tanks had a capacity of 10,000 gallons and one had a capacity of 4,000 gallons. On two separate occasions, No. 2 oil was released from one or both of these tanks. Records are unclear as to which tank the oil was released from.	January 1950 - May 1989	Evidence of a Release to Soil/ Surface Water	CT DEP 1978, 1983b
#13 - Sulfuric and Muriatic Acid Tanks	A 10,000 gallon and 6,000 gallon aboveground tanks for sulfuric and muriatic acid, respectively. These tanks are located in a bermed area east of the large cleaning house.	1990-Active	Low Potential for Release	Cook 1992a
#14 - Acid Recovery Unit	Process for recovering spent pickling acid. The precipitation unit is in the large cleaning house. The recovery tank is located on a cement pad in a bermed area, on the outside of the building.	Unknown-Active	Low Potential for Release	Cook 1992a

SITE ACTIVITY /HISTORY

According to the Branford town records Atlantic has owned this property since 1906 (Cook 1992b). The property was obtained from 14 different land owners between 1906 and 1918 (Cook 1992b). Prior to Atlantic's occupation, the property was used for private residences or was vacant (Cook 1992b).

At the time of the OSR, the Atlantic manufacturing process included receipt of spools of steel rods which were cleaned, drawn and annealed into specified widths of wire. This wire is then sold to various industrial manufactures (Cook 1992a). No other processes, are known to have been historically conducted on the property (Cook 1992a).

Initially, the steel rods are cleaned inside the large cleaning house area by a pickling and descaling process using hydrochloric acid, hydrogen sulfate and potassium permanganate acid. The rods are then dipped in a lime/borox mixture which aids the adherence of the drawing compound to the wire. Drawing compounds include water soluble oils, stearates and tallow (CT DEP 1990).

The rods are then placed on a drawing machine which draws the rods out to a specified diameter of wire. Annealing then occurs in a gas furnace with a nitrogen/propane atmosphere (CT DEP 1990).

The wire goes through a second cleaning process in the small or large cleaning area depending on the type of wire. A final draw of the wire occurs and the wire is then finished in the small cleaning house area by cleaning in muriatic acid, rinsing in potassium permanganate, dipping in a base coating of stannous sulfate, copper sulfate and hydrogen sulfate and an immersion in copper sulfate/5% hydrogen sulfate (CT DEP 1990).

The raw materials used in the cleaning, drawing, and finishing processes are stored in the second floor chemical storage area (AOC #1). Wastes from these processes are described in Table 2.

Atlantic uses an acid recovery unit for reclamation of spent acid pickle liquor. This unit consists of a crystallizer, crystal drainage tank and recovered acid tank. Through gradual cooling, ferrous sulfate crystals are formed. The recovered acid is drained into the acid recovery tank, a steel aboveground bermed tank located on an outdoor concrete slab on the east side of the property (Cook 1992a). The ferrous sulfate crystals are washed and conveyed to the roofed outdoor storage area (Camp and Associates 1982).

Atlantic utilizes a continuous rinsewater treatment system to treat tank drag-out and floor waste material. The building basement has two 500 gallon tanks which collect rinse water, floor spills and tank drag-out. The wastewater is neutralized by addition of sodium hydroxide prior to treatment in the Lamella Clarifier gravity settler. The wastewater from the gravity settler is

discharged into the Branford River under NPDES permit CT0000159. The discharge rate is approximately 317,000 gallons per day (CT DEP 1975). Sludge generated in the treatment process is stored in a 10,000 gallon holding tank prior to being shipped directly to a lagoon operated by the City of Branford Sewer Authority (Camp and Associates 1982). At the time of the OSR, the sludge had been EPA delisted (Cook 1992a).

Atlantic's major waste streams are described in Table 2. Permanganate sludge, currently being disposed of as a non-hazardous waste into the Branford Landfill, was found to have a Ph of 12.78 as analyzed in 1990 by Aqualogic, North Haven. This sludge has not been tested for metals by Aqualogic at the time of the OSR (CT DEP 1991). Monitoring results were not available in the files for review.

Table 2

Hazardous Waste Quantity

Substance	Quantity/Year	Years of Use/Storage	Years of Disposal	Source Area
Lime Sludge	10 drums	1906-1992	N/A	N/A
Phosphate Sludge	60 drums	1906-1992	N/A	N/A
Floor sludge	2 yds	1906-1992	N/A	N/A
Waste Mineral Spirits	24 drums	1906-1992	N/A	N/A
Waste Oil	12 drums	1906-1992	N/A	N/A
Ferrous Sulfate Crystals	7,600,000 pounds	1966-1992	N/A	N/A
Contaminated Process Water Sludge (once classified as FOO6 now EPA delisted)	1,300,000 gallons	1966-1992	N/A	N/A
Permanganate sludge	10 drums	1906-1992	N/A	N/A

Sources: (CT DEP 1990; Cook 1992d)

N/A = Not Applicable. Wastes shipped off-site.

Atlantic has operated as a small quantity generator and permitted storage facility since August 13,1980, under EPA ID number CTD001161181 (EPA 1991). A RCRA Part A permit storage facility was filed on November 19,1980. Atlantic is currently a candidate for a status change from a storage facility to a generator only. This has been pending since 1984 (EPA 1991).

Atlantic uses several haulers for waste disposal off-site. Phosphate and permanganate sludges are drummed and transported by Royal Coating to the Branford Landfill. US EPA delisted wastewater sludge is transported to the Branford City Lagoon by Atlantic Trucking. Lime sludge is transported by CECOS to a CECOS facility in Bristol, Connecticut. Ferrous sulfate crystals are transported by Mark Cole Trucking to Waste Stream Environmental of Syracuse, New York. Waste mineral spirits are handled by Safety Kleen Company, and waste oils are transported and treated by Northeast Solvents (Cook 1992a, 1992d).

Fourteen discharges are documented to have occurred at Atlantic. A summary of discharges are described in Table 3.

Table 3

Atlantic Wire Spills

Date	Substance/ Amount*	Cause	Environment Impacted	Further Action
September 5, 1975	Acid/100 gals	Unauthorized Disposal. Route to River Unknown.	Branford River	Unknown
March 2, 1976	Acid/200 gals	Unauthorized Disposal. Route to River Unknown.	Branford River	Unknown
March 3, 1976	Iron Sludges/ Quantity Unknown	Unauthorized Disposal. Route to River Unknown.	Branford River	Unknown
June 23, 1977	Rust Color Discharge/Quantity Unknown	Pipe discharge to NPDES outfall.	Branford River/ Wildlife - three dead ducks found near outfall.	Unknown
July 7, 1978	No. 2 oil/4,000 gals	Tank overflow. Route to River Unknown.	Branford River	Tank removed May 1989.
July 10, 1979	Propane Leak/200 gals	Faulty shut-off valve on tank. Route to River Unknown.	Branford River	Repairs made to tank.
August 13, 1979	Reddish Brown Substance	Improper treatment discharge to NPDES outfall.	Branford River	Polymer adjusted.
August 27, 1979	Reddish Brown Discharge	Improper treatment discharge to NPDES outfall. Route to River Unknown.	Branford River	Unknown
May 5, 1980	Caustic Soda/ Quantity Unknown	Loaded into wrong tank. Route to River Unknown.	Branford River	Wastewater treatment system adjusted.
May 20, 1980	Orange Discharge	Treatment system overload discharge to NPDES outfall.	Branford River	New pipe installed.
December 23, 1981	Cooling Water	Pipe leak. Route to River Unknown.	Branford River	Polymer adjusted.

Table 3

Atlantic Wire Spills
(concluded)

Date	Substance/ Amount*	Cause	Environment Impacted	Further Action
July 12, 1983	No. 2 Oil/50 gals	Tank overflow during storms. Route to River Unknown.	Branford River	Tank removed May 1985.
September 22, 1983	Water Soluble Coolant/Quantity Unknown	Tank overflow caused by a blocked pipe.	Flowed Down Meadow Street to Storm Sewer	Tank removed 1984-1985.
September 5, 1988	Discharge Various Colors	Discharge from NPDES outfall.	Branford River	Polymer adjusted.

Sources: (CT DEP 1991d; ESHD 1992)

* All these spills were reported through direct observation. No analytical data was available in the files.

In the early 1980's Atlantic had on-going violations of their NPDES permit CTD0000159 which led to the issuance of a CT DEP compliance order followed by a referral to the Attorney General. This led to a settlement which included stipulated penalties for discharge violations (CT DEP 1989b). Atlantic continued to violate their NPDES permit during the years 1986-1988 which resulted in the issuance of several additional CT DEP compliance orders (CT DEP 1989b). On March 22, 1989 these violations were again referred to the Attorney General (CT DEP 1989b). No analytical results were available in the files for any of the permit violations.

During the OSR, Atlantic's contact stated that Atlantic's NPDES permit expired on January 17, 1991. Atlantic is currently operating under their old permit guidelines until a new permit is issued (Cook 1992a).

Atlantic was issued a Notice of Violation from the CT DEP Air Compliance Department for operating a Cleaver Brooks boiler without a permit (CT DEP 1986a). Atlantic was issued an air permit (No. 1003) for this unit on August 26, 1986 (CT DEP 1986b). There was no reference of any violations of this air permit in the files.

ENVIRONMENTAL SETTING

Atlantic is located geographically in the South Central Shoreline region of Connecticut. The

surfical geology of the area is described as deposits of artificial fill consisting of sand, gravel, silt, and clay (Flint 1964). The bedrock geology under the property consists of granite and gneiss (Brown 1976). The depth to bedrock is estimated to be 50 to 100 feet (Brown 1976).

The property is located in the South Central Eastern Regional Basin within the South Central Coast Major Basin (CT DEP 1982). According to the Groundwater Classification of Connecticut Map, groundwater beneath the property is GB. A GB classification indicates those waters which may not be suitable for direct human consumption due to waste discharges, spill or leaks of chemicals, or land use impacts. The state's goal is to prevent further degradation (CT DEP 1991). The property is located within the 100 year floodplain of the Branford River (Cook 1992b).

Groundwater uses within a four mile radius of the property include drinking and industrial water supplies (Cook 1992c). Groundwater is estimated at 10 feet beneath the ground surface, based on surface water elevation surrounding the area. The nearest private drinking water well to the property is located approximately 1,500 feet to the northwest (Cook 1992c). Within a four mile radius of the property, an estimated 3,740 people are served by private wells. There are no municipal water supply wells or blended supply systems within four miles of Atlantic (CT DEP 1982; Cook 1992c).

Table 4 illustrates population served by private wells in radial distance ring categories shown on Figure 3. Table 4 illustrates approximate population within four miles of the facility. Figure 3.

Table 4

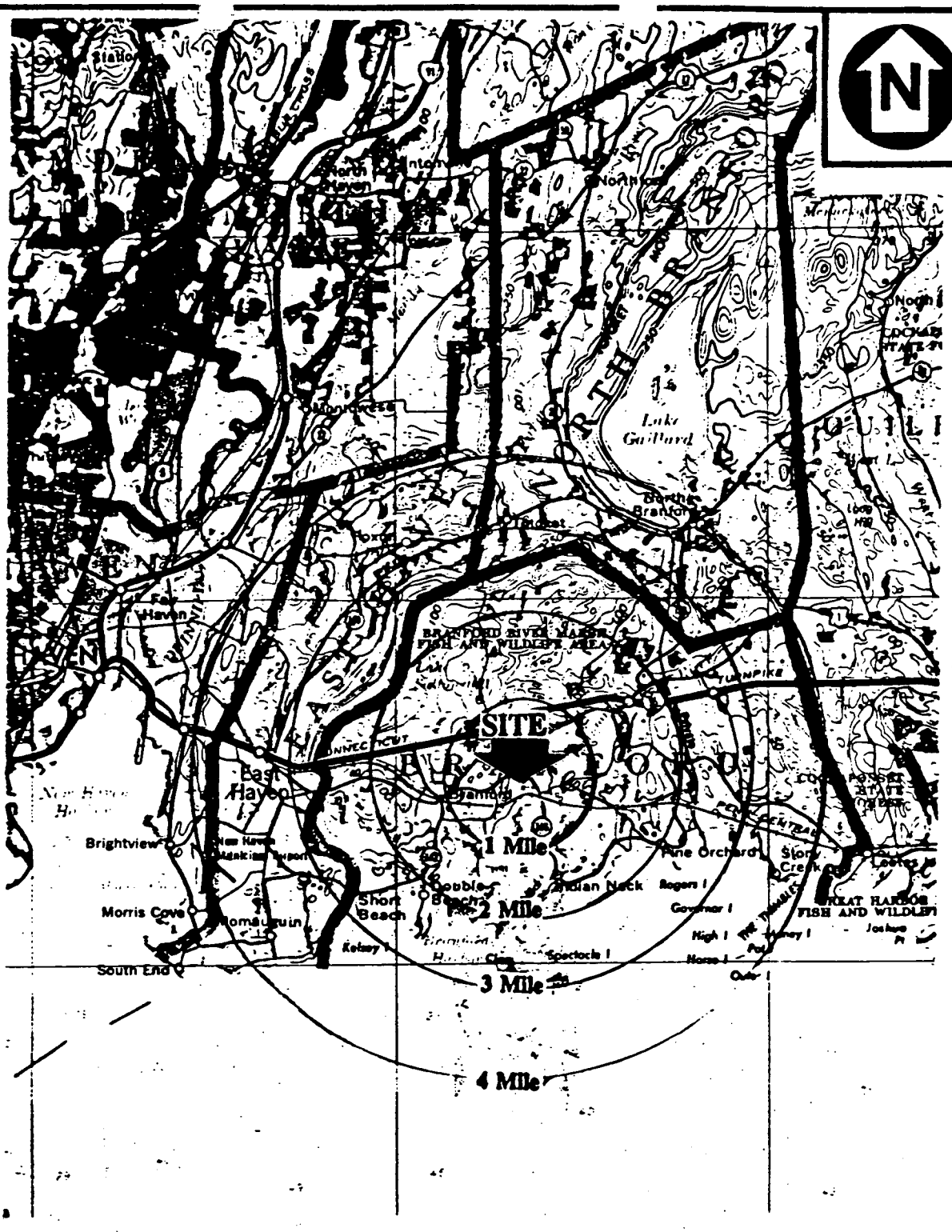
Approximate Drinking Water Populations Served By Groundwater Sources Within Four Miles of Atlantic

Distance Ring	Town	Estimated Population Served by Private Well	Total Per Ring
0.00 - 0.25	Branford	144	144
0.25 - 0.50	Branford	144	144
0.50 - 1.00	Branford	144	144
1.00 - 2.00	Branford	432	432
2.00 - 3.00	Branford North Branford East Haven	814 68 99	981
3.00 - 4.00	Branford North Branford East Haven Guilford	1,073 472 300 50	1,895
TOTAL:			3,740

Source: (Cook 1992c)

The Branford River is approximately 250 feet south of the property. The state water classification for the Branford River in the vicinity of the property is SB/SA. This classification indicates the river is a coastal water which can presently can be used for recreation, fish and wildlife habitat, agricultural, industrial supply, and navigation. The goal is to restore the water quality to a SA classification (CT DEP 1991a).

The most probable point of entry (PPE) of contaminants to the surface water migration pathway is a tidal flat located at the southern tip of the property which converges with the Branford River located approximately 250 feet away (Cook 1992a). Branford River mean flow is estimated to be less than 10,000 cubic feet per second (cfs) - (Cook 1992a). The Branford River flows into Branford Harbor approximately one and one-half miles south from the property. Branford Harbor is a portion of Long Island Sound (USGS 1984).



FOUR MILE RADIUS
ATLANTIC WIRE CO.
BRANFORD, CONNECTICUT

ARCS REGION I
CONTRACT NO. 68-W9-0018

FIGURE 3

There are no surface water intakes along the 15 mile downstream pathway (USGS 1984). Based on OSR observations and state water classifications, all downstream water pathways can be considered as fisheries (CT DEP 1991a; Cook 1992a).

Nearby sensitive environments include a tidal flat wetland adjacent to the south side of the property (Cook 1992a), the Branford River Wildlife Area approximately one mile north of the property, the Pine Orchard Wildlife Area approximately two and one-half miles southeast of the property and the East Haven Marsh Wildlife Area approximately three miles to the west of the property (EPA 1992). The CT DEP Natural Diversity Data Base notes ten endangered or threatened species within four miles of the property (CT DEP 1992). Appendix B provides a list of these species.

Atlantic employs 676 workers who work in three shifts (Cook 1992a). There are an estimated 48,372 residences within four miles of Atlantic (CT DED 1991). The nearest regularly occupied building is on-site and is the production building (Cook 1992a). Table 5 summarizes the approximate resident by radial distance ring population within four miles of Atlantic.

Table 5

Approximate Population Within Four Miles Of Atlantic

Radial Distance From Atlantic (miles)	Approximate Population
0.00 - 0.25	66
0.25 - 0.50	188
0.50 - 1.00	754
1.00 - 2.00	3,019
2.00 - 3.00	12,144
3.00 - 4.00	32,201
TOTAL:	48,372

Source: (CT DED 1991)

SUMMARY

Atlantic is located at One Church Street in Branford, New Haven County, Connecticut. The approximately five acre property is located in a industrial zoned section of Branford (Cook 1992b). There is one three story 15,000 square foot building on the property which is currently used in the production of copper coated steel wire. The property has one paved parking area located on its eastern side. The remainder of the lot is an unpaved delivery yard.

The Atlantic property is bounded by Meadow Street to the north and Amtrack right-of-way to the south. The Branford River is located south of the right-of-way. Montowese Street is located to the east and Church Street is located west of the property (Cook 1992a).

Atlantic is served by public water and sewer systems. Approximately 317,000 gpd of wastewater are discharged into the Branford River under NPDES permit No. CTD000159. The current permit is expired. Atlantic is currently operating under the expired permit guidelines until a new permit is issued (Cook 1992a).

Atlantic has been active on this property manufacturing wire from steel rods since 1906. Cleaning, drawing and annealing are used in the manufacturing. Hydrochloric acid, hydrogen sulfate, muriatic acid, potassium permanganate and stannous sulfate are used. Twelve AOCs were identified on the property.

Drummed wastes are stored in the basement area. Other wastes are treated by Atlantic's acid reclamation system and wastewater treatment system. Scrap metal is stored in the delivery yard in a 30 yard dumpster. Other metal scrap and old production tanks are strewn around the delivery yard.

Atlantic has eight aboveground steel tanks on the property. These tanks include: one partially bermed 9,000 gallon nitrogen tank; one partially bermed 1,200 gallon propane storage tank; one bermed 1,200 gallon sulfuric acid tank; one bermed 6,200 gallon muriatic tank; one 10,000 gallon No. 6 oil tank. The three remaining steel tanks are located in an unbermed gravel area surrounded by a locking chain link fence. These tanks include a 3,000 gallon caustic storage tank, a 10,000 gallon lamella clarifier tank; a 100,000 gallon wastewater treatment sludge tank.

An estimated 3,740 people are served drinking water by private wells within a four mile radius of the property. All downstream surface waters support fish based on OSR observations and state water classifications.

Nearby sensitive environments include a tidal flat wetland located on the southern border of the property and three wildlife areas, the nearest being approximately one and one-quarter miles north of the property. Ten endangered or threatened species were identified by the CT DEP Natural Data Base located within four miles of the property.

At this time EPA recommends that Atlantic be deferred to the RCRA program for further evaluation.

Submitted by:

Deanna L. Cook
Site Manager

Joseph D. Mastone
Task Manager

REFERENCES

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APPENDIX A

AOC DESCRIPTION OUTLINE

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#1
AOC Name:	Chemical/Waste Oil Storage
AOC Status:	Low Potential for Release (Cook 1992a)
AOC Description:	This storage area is located on the second floor in a 30 by 75 foot area used for raw chemical storage and waste oil storage. The chemical waste and chemical product drums are stored on wooden pallets, and on the concrete floor. Waste oil drums are stored at the far end of the room in a chained off area. Directly across from the storage area is the former machine drawing operation, which is in the process of being removed (Cook 1992a).
AOC Start-Up Date:	1970's (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Copper sulfate, stannous sulfate, muriatic acid, permanganate, waste oil (Cook 1992a).
Release Controls:	No release controls exist for this part of the building (Cook 1992a).
Release History:	During the OSR, the concrete floor was observed to be stained and in poor condition (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#2
AOC Name:	Small Cleaning House
AOC Status:	High Potential for Release (Cook 1992a)
AOC Description:	A small cleaning house with an unsealed concrete floor, is located on the first floor at the east end of the production building and is used for the secondary cleaning of the wire as well as some wire finishing. Three 1,000 gallon tanks of muriatic acid; three 600 gallon tanks of potassium permangante; one 1,000 gallon copper flash tank; one 600 gallon liquor tank; one 500 gallon soap tank; four 500 gallon rinse tanks; and one 500 gallon lime tank; are located in this building (CT DEP 1990).
AOC Start-Up Date:	1906 (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Waste Managed at AOC:	3,000 gallons muriatic acid; 1,800 gallons potassium permanganate; 1,800 gallons sodium hydroxide; 1,000 gallons copper; 600 gallons liquor; and 500 gallons lime (Cook 1992a).
Release Controls:	The cleaning house tanks are contained in troughs which lead to the basement rinse water separator (Cook 1992a). These troughs were noted to be in poor condition during the OSR (Cook 1992a).
Release History:	During the OSR the concrete floor area surrounding the tanks was observed to be stained, the concrete and brick trough floors were cracked and corroded, and the sides of the tanks were covered with stains and sludge (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#3
AOC Name:	Large Cleaning House
AOC Status:	High Potential for Release (Cook 1992a)
AOC Description:	Steel rods enter this building on a mechanical conveyor belt run by one operator from the outside delivery yard, through an overhead door. The rods are processed through a series of cleaning tanks in preparation for the drawing process. The cleaning line consists of three 5,000 gallon soap tanks, two 8,000 sulfuric acid tanks, one 5,000 gallon sulfuric acid tank, one 7,000 lime tank, one 4,000 gallon phosphate tank, one 4,000 gallon potassium permanganate tank. The line is mounted on an unsealed concrete floor (Cook 1992a).
AOC Start-Up Date:	1906 (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Waste Managed at AOC:	16,000 gallons sulfuric acid; 4,000 gallons potassium permanganate; 4,000 gallons phosphate; 5,000 gallons sulfuric acid; 7,000 gallons lime (Cook 1992a).
Release Controls:	Tanks are located in troughs which drain to the wastewater treatment system (Cook 1992a).
Release History:	During the OSR, staining was observed on the floor in the vicinity of the tanks, and on the tanks (Cook 1992a). The overhead door was observed to be open when not in use, allowing access to the outside unpaved delivery yard (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#4
AOC Name:	Basement Tanks
AOC Status:	High Potential for Release (Cook 1992a)
AOC Description:	The basement area with an unsealed concrete floor, is located at the center of the production building. It contains two 500 gallon holding tanks for wastewater from the large and small cleaning houses. Wastewater from these tanks is transferred by gravity to the Lamella Clarifier located outside. Two 5,000 gallon water cooling tanks, used for cooling the drawing machines, are also located in this area. A separate piping system for septic waste runs through the basement (Cook 1992a).
AOC Start-Up Date:	1966 (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Cleaning house wastewaters (Cook 1992)
Release Controls:	A three inch deep trough, used for spill control of the wastewater is located in this area. Overflow from the holding tanks enters the trough and is pumped via a sump pump to the treatment system (Cook 1992a). This area has no secondary containment (Cook 1992a).
Release History:	During the OSR, the concrete floor was observed to be stained and in poor condition. Staining was also observed on the sides of the tanks (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#5
AOC Name:	Nitrogen and Propane Tanks
AOC Status:	Low Potential for Release (Cook 1992a)
AOC Description:	One 1,200 gallon propane tank and one 9,000 gallon nitrogen tank are located outside at the east end of the delivery yard (Cook 1992a).
AOC Start-Up Date:	1970's (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Nitrogen and propane (Cook 1992a)
Release Controls:	Both tanks described above are partially bermed and are located directly on the ground surface. A chain link fence surrounds the unbermed area (Cook 1992a).
Release History:	There were no records of any release found in the EPA or State files (Cook 1992a). No evidence of any release was observed during the OSR (Cook 1992).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#6
AOC Name:	Ferrous Sulfate Crystals Waste Pile
AOC Status:	High Potential for Release (Cook 1992a)
AOC Description:	The ferrous sulfate waste pile, for acid reclamation , was located in a roofed, open sided building at the east end of the delivery yard. A portion of the waste pile is located on a concrete pad. During the OSR, ferrous sulfate was observed on the ground surface (Cook 1992a).
AOC Start-Up Date:	1970's (Cook 1992d)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Ferrous sulfate crystals, tested by Aqualogic Lab, New Haven, Connecticut. June 13, 1990 results: pH 2.4 Metals: Fe 182 g/kg, Cr 9.27 mg/kg, Pb 7.44 mg/kg, Cd 1.10 mg/kg (CT DEP 1990).
Release Controls:	No release controls (Cook 1992a)
Release History:	During a CT DEP 1990 inspection, it was noted that a portion of the ferrous sulfate crystal waste pile is exposed to outside and may be subject to stormwater runoff (CT DEP 1990). A front loader was observed to be transporting ferrous sulfate crystals through the unpaved yard into a truck (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#7
AOC Name:	Delivery Yard Area
AOC Status:	High Potential for Release (Cook 1992a)
AOC Description:	This area consists of an unpaved yard area surrounding the production building to the east, west and south. Trucks enter the yard to pick up and deliver wire products, raw materials, and chemicals. The aboveground 10,000 gallons No. 6 oil tank; 1,200 gallon sulfuric acid tank; and 6,000 gallon muriatic acid tank, are located in this yard. There are three dumpsters used for scrap metal and other miscellaneous rubbish located at the west side of the yard. At the time of the OSR, the yard was cluttered with metal scrap, old wire spools, old machinery, and old production foot tanks (Cook 1992a).
AOC Start-Up Date:	1906 (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Scrap metal and other miscellaneous rubbish, 1,200 gallons propane, 9,000 gallons nitrogen; 10,000 gallons No. 6 oil; 1,200 gallon sulfuric acid; and 6,200 gallons muriatic acid.
Release Controls:	Because of direct soil exposure there are no release controls present (Cook 1992a).
Release History:	Staining of soil was observed in the area of the ferrous crystal pile and in the northwestern corner of the yard (Cook 1992a). The site contact during the OSR stated production foot tanks were rinsed and cleaned in-house before being placed in the yard. The exterior of two of the tanks were stained, however, the interior of these tanks were visually clean, at the time of the OSR (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#8
AOC Name:	Wastewater Treatment System
AOC Status:	High Potential for Release (Cook 1992a)
AOC Description:	Processed wastewater is conveyed to a neutralization tank located at the west end of the plant. Caustic addition is automatically controlled to achieve a pH of 9.2. Subsequent to neutralization, wastewater is pumped by two, bilevel controlled, vertical turbine pumps to the flocculation chamber. Anionic polymer is added to promote a settable floc. The waste then flows by gravity to the Lamella clarifier. Sludge is discharged to the sludge holding tank situated below the clarifier. The supernatant from the clarifier is discharged into the effluent sump where it mixes with noncontaminated cooling waster and flows by gravity into the Branford River (Camp and Assoc 1982). The tanks are located in a gravel unbermed area surrounded by a locking chain link fence (Cook 1992a).
AOC Start-Up Date:	1966 (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Wastewater from small and large cleaning houses, B-8 Liquid caustic soda for pH adjustment, anionic polymer (Camp and Assoc. 1982).
Release Controls:	There are no release controls for this AOC. Tanks are unbermed and located on a gravel area (Cook 1992a).
Release History:	No release history was found for this AOC (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#9
AOC Name:	NPDES Outfall
AOC Status:	Evidence of a Release to Surface Water (CT DEP 1989b)
AOC Description:	This area consists of the outfall for treated wastewater into the Branford river. This outfall is located at the southern side of the property across from the railroad tracks and tidal flat. At the time of the OSR, one discharge pipe was observed to be chipped and cracked. An old discharge pipe was repaired at the outfall end (Cook 1992a). The approximately 317,000 gallons of treated wastewater are discharged into the Branford River on a daily basis under a NPDES permit (CT DEP 1975).
AOC Start-Up Date:	1966 (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Treated wastewater from small and large cleaning houses (Cook 1992a).
Release Controls:	No release controls were noted (Cook 1992a)
Release History:	During the OSR, rocks were noted to be stained near the outfall point. The discharge water was observed to be clear (Cook 1992).

In 1979-1980, the discharge was noted to be a red-brown color on several occasions. Atlantic violated their NPDES permit on several occasions through out 1986-1988. Presently, Atlantic's NPDES permit has expired (CT DEP 1989b). Atlantic is currently operating under the conditions of the expired permit until a new permit is issued (Cook 1992a).

On September 7,1988, an inspection by the East Shore District Health Department stated that discharge from the pipe was a murky color and had a strong chemical odor. This inspection occurred after a complaint of a milky discharge which turned red after entering the river. Analytical results of the discharge were conducted on September 8, 1988. The results are as follows: pH 6.7, BOD 320mg/l, Cd 0.01 Cu 1.9mg/l, Cr 0.03ml, Ni 0.07mg/l, Pb 0.43mg/l, Zn 11mg/l (ESHD 1988).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#10
AOC Name:	Meadow Street Parking Lot (Cook 1992a)
AOC Status:	High Potential for Release (Cook 1992a)
AOC Description:	This area consists of an unpaved area used for employee parking, located across Meadow Street from the main property. During the OSR, a tanker truck used by Atlantic Trucking Company to haul wastewater treatment sludge to the Branford landfill lagoon; a former furnace used in the annealing process, and miscellaneous scrap metal were observed (Cook 1992a).
AOC Start-Up Date:	1906 (Cook 1992a)
AOC Closure Date:	Active (Cook 1992a)
Wastes Managed at AOC:	Scrap Metal Wastewater Treatment Sludge (Cook 1992a)
Release Controls:	There are no release controls for this AOC (Cook 1992a).
Release History:	There were no records of any release found in the EPA or State files. No evidence of any release was observed during the OSR (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number	#11
AOC Name:	Water Soluble Machine Coolant Tank
AOC Status:	Evidence of a Release to Soil (CT DEP 1983b)
AOC Description:	This area consists of a 1,000 gallon inground steel water soluble coolant tank formerly located outside of the production building along Meadow Street (CT DEP 1983b). This tank was used as part of Atlantic's former wet wire treatment process (Cook 1992d).
AOC Start-Up Date:	1960's (Cook 1992d)
AOC Closure Date:	Removed 1984-1985 (Cook 1992d)
Wastes Managed at AOC:	Water soluble coolant (Cook 1992a)
Release Controls:	Unknown (Cook 1992a)
Release History:	An inspection was conducted by DEP Hazardous Waste field inspector in response to Complaint #337 (CT DEP 1983a, 1983b). At the time of the DEP inspection, the water coolant tank was found to be overflowing into an open pit used to receive roof drainage due to a broken pipe, thus allowing water-soluble machine coolant to flow into a trough to a pit. The coolant than overflowed onto Meadow Street to a storm drain (CT DEP 1983b). Frank DeMario, a nearby resident, filed complaint #337 after witnessing the overflow several times.

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#12
AOC Name:	No. 2 Fuel Oil Tank
AOC Status:	Evidence of a Release to Soil/Surface Water (CT DEP 1978; CT DEP 1983d)
AOC Description:	This area consists of three steel No. 2 fuel oil tanks formerly located in the northeast corner of the property. Two of the tanks were 10,000 gallon capacity tank, and one was a 4,000 gallon capacity tank (Cook 1992d).
AOC Start-Up Date:	January 1950 (CT DEP 1991c)
AOC Closure Date:	May 1989 (Cook 1992d)
Waste Managed at AOC:	No. 2 fuel oil (Cook 1992a)
Release Controls:	Unknown (Cook 1992a)
Release History:	On July 7,1978, 4,000 gallons of No. 2 fuel oil overflowed from Atlantic's tank. A total of 1,500 gallons reached the Branford River (CT DEP 1978). On August 12, 1983, 50 gallons of No. 2 fuel oil overflowed from Atlantic's tank into the city storm sewer (CT DEP 1983d).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#13
AOC Name:	Sulfuric and Muriatic Acid Tanks
AOC Status:	Low Potential for Release (CT DEP 1978; CT DEP 1983d)
AOC Description:	A 10,000 gallon and 6,000 gallon aboveground storage tanks used for virgin sulfuric and muriatic acid, respectively. These tanks are on a concrete pad within a bermed area, located immediately east of the large cleaning house (Cook 1992a).
AOC Start-Up Date:	1990 (CT DEP 1991a)
AOC Closure Date:	Active (Cook 1992a)
Waste Managed at AOC:	Virgin sulfuric and muriatic acids contained in 10,000 and 6,000 gallon tanks, respectively (Cook 1992a)
Release Controls:	These tanks are located in a bermed area over a concrete pad (Cook 1992a).
Release History:	There is no record of a release from this AOC (Cook 1992a).

June 22, 1992

AOC DESCRIPTION OUTLINE

AOC Number:	#14
AOC Name:	Acid Recovery Unit
AOC Status:	Low Potential for Release (CT DEP 1978; CT DEP 1983d)
AOC Description:	This unit consists of a crystallizer, crystal drainage tank and recovered acid tank. The recovered acid tank is located in a bermed area on a concrete slab on the east side of the main building. The size of this tank is unknown (Cook 1992a).
AOC Start-Up Date:	Unknown (CT DEP 1991a)
AOC Closure Date:	Active (Cook 1992a)
Waste Managed at AOC:	Recovered acids (muriatic and sulfuric). Size of tank is unknown (Cook 1992a)
Release Controls:	These tanks are located in a bermed area over a concrete pad (Cook 1992a).
Release History:	There is no record of a release from this AOC (Cook 1992a).

June 22, 1992

APPENDIX B

CT DEP NATURAL DIVERSITY DATABASE

NDDB/SRC SITE REQUEST REPORT

NDDB REFERENCE NO.: 50962 SRC SITE LAT/LON: 41 16 39, 72 45 03
TOWN NAME: BRANFORD QUAD. NAME, NO.: BRANFORD (36)
DATE NDDB DATA BASE QUERIED: March 05, 1992
NO. OF NDDB POINTS WITHIN FOUR MILES OF SITE: 45

Atlantic Wh

NO NDDB POINTS WITHIN .25 MILE RADIUS OF SRC SITE

NO NDDB POINTS BETWEEN .25 AND .5 MILE RADIUS OF SRC SITE

1 NDDB POINT(S) BETWEEN .5 AND 1 MILE RADIUS OF SRC SITE

COMMON NAME	NAME	DATE*	STATU
	BRACKISH INTERTIDAL MARSH	1985	

6 NDDB POINT(S) BETWEEN 1 AND 2 MILE RADIUS OF SRC SITE

COMMON NAME	NAME	DATE*	STATU
FOUR-TOED SALAMANDER	HEMIDACTYLIUM SCUTATUM	1968-04-06	
FOURSPINE STICKLEBACK	APELTES QUADRACUS	1970	
COMMON TERN	STERNA HIRUNDO	1989	SC
ROSEATE TERN	STERNA DOUGALLII	1984	E LE
	SALTWATER INTERTIDAL FLAT	1988	
SWAMP COTTONWOOD	POPULUS HETEROPHYLLA	1895-07-31	E

14 NDDB POINT(S) BETWEEN 2 AND 3 MILE RADIUS OF SRC SITE

COMMON NAME	NAME	DATE*	STATU
THREERIDGE VALVATA	VALVATA TRICARINATA	1979	SC
	SUBACIDIC CLIFFS	1986	
PURPLE MARTIN	PROGNE SUBIS	1986	SC
WHITLOW-GRASS	DRABA REPTANS	1878-04-18	SC
COMMON LOON	GAVIA IMMER	1890	SC
HAIRY LIP-FERN	CHEILANTHES LANOSA	1926-06-11	E
SMALL SKULLCAP	SCUTELLARIA LEONARDII	1985	E
DOUBLE-CRESTED CORMORANT	PHALACROCORAX AURITUS	1989	SC
COMMON TERN	STERNA HIRUNDO	1983	SC
COMMON TERN	STERNA HIRUNDO	1980	SC
DIOECIOUS SEDGE	CAREX STERILIS	1915-07-25	SC
YELLOW PIMPERNELL	TAENIDIA INTEGERRIMA	ND	SC
DOUBLE-CRESTED CORMORANT	PHALACROCORAX AURITUS	1983	SC
COMMON TERN	STERNA HIRUNDO	1980	SC

24 NDDB POINT(S) BETWEEN 3 AND 4 MILE RADIUS OF SRC SITE

COMMON NAME	NAME	DATE*	STATU
MOSSY VALVATA	VALVATA SINCERA	1979	SC
LITTLE GREEN SEDGE	CAREX VIRIDULA	1882-08-07	E
JEFFERSON SALAMANDER	AMBYSTOMA JEFFERSONIANUM	1956	SC
SWEET-SCENTED INDIAN-PLANTAIN	CACALIA SUAVEOLENS	CA 1900	SC
VASEY PONDWEED	POTAMOGETON VASEYI	1880-09-04	SC
GREEN MILKWEED	ASCLEPIAS VIRIDIFLORA	1899-10-01	SC
EASTERN PRICKLY PEAR	OPUNTIA HUMIFUSA	1852	SC
SWEET-SCENTED INDIAN-PLANTAIN	CACALIA SUAVEOLENS	1941-09-07	SC
PIPING PLOVER	CHARADRIUS MELODUS	1988	T LE
GREAT EGRET	CASMERODIUS ALBUS	1989	T
SNOWY EGRET	EGRETTA THULA	1989	T
ROSEATE TERN	STERNA DOUGALLII	1951	E LE
CHUCK-WILL'S-WIDOW	CAPRIMULGUS CAROLINENSIS	1977	
BLACK-CROWNED NIGHT-HERON	NYCTICORAX NYCTICORAX	1989	SC
	COASTAL SAND DUNES	1985	

SMALL SKULLCAP	SCUTELLARIA LEONARDII	1989-08-09	E
	SALTWATER INTERTIDAL BEACHES AND SH		
GOLDEN ALEXANDERS	ZIZIA APTERA	1990-06-19	E
EASTERN PRICKLY PEAR	OPUNTIA HUMIFUSA	1979-07	SC
COMMON TERN	STERNA HIRUNDO	1989	SC
ROSEATE TERN	STERNA DOUGALLII	1989	E
	SALT MARSH	1984	
EASTERN PRICKLY PEAR	OPUNTIA HUMIFUSA	1985	SC
STIFF GOLDENROD	SOLIDAGO RIGIDA	1990-06-19	E

*DATE = DATE OF LAST OBSERVATION
*STATUS (FIRST ENTRY) = STATE STATUS
*STATUS (SECOND ENTRY) = FEDERAL STATUS